

Results of Oral Hemangioma Treatment

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Abstract: This article discusses the application of the algorithm developed by us, which we used when choosing the tactics for treating DSO, involves the use of modern laser technologies and drug therapy aimed at a radical cure, along with minimal trauma, functional safety, and good cosmetic results. The treatment algorithm takes into account the forms of DSO, phases of development, localization, and age of patients.

Keywords: hemangioma, oral cavity, Врожденная гемангиома.

Introduction: Poor access to oral hemangiomas, cosmetic results are an unsolved problem of maxillofacial surgery and oncology. Intraoral location, high complication rate and difficulty of treatment are the subject of scientific work. The method of treatment must meet the requirements of safety for the child's body, be radical, minimally invasive (especially for the newborn), with a good cosmetic result for hemangiomas located in the oral cavity and its border areas. [1,4,5,7,9].

From our point of view the greatest interest is represented by further researches of optimization of high-energy lasers usage especially of infra-red spectrum in oral hemangiomas as well as by introduction of new technologies allowing to prevent the risk of scar tissue development.

The study of long-term results of isolated use of high-energy lasers (CO₂, AIG-neodymium, Argon, Pulsed Ruby, etc.) showed that they are not quite satisfactory in the treatment of HA located in the maxillofacial region in particular the oral cavity of the border zone. Almost all of them damage deep layers of soft tissues in newborns and children. Lasers with a shallower penetration depth have no hemostatic effect (Erbium and Excimer). Argon, KTP, and Nd-YAG lasers pose additional problems associated with the risk of overdose, as it is impossible to visually control the depth of damage during surgery [2,3,5,6,8].

Results and discussion: An analysis of the results of hemangiomas treatment in different medical institutions was carried out. Patients were treated with the diagnosis of hemangioma based only on the external manifestations of vascular formations. (Table 1).

Table 1. Preliminary and verified diagnosis in comparison group patients

Preliminary	Capillary hemangioma n-23	Cavernous hemangioma n -33	Mixed form n- 44	Total n-100
Diagnosis	21	24	35	80
Final	1	4	7	12
final diagnosis	2	4	2	8

P< 0,05

The advantage of the established former classification is its apparent simplicity, as well as the possibility of clinical assessment of vessel diameter and blood flow. However, it does not take into account the stages and phases of H. growth and, perhaps, corresponds to the classification of malformations to a greater extent. Depending on the age of the patients, the assessment of hemangiomas' form also varied (Table 1). At the age of less than one year, the prevailing diagnosis was simple hemangioma, and after one year, the cavernous form of hemangioma was more frequently diagnosed.

Peculiarities of the traditional treatment:

- Waiting tactics
- Conservative therapy: hormonal therapy, interferon, squeezing, timolol)
- Surgical methods: sclerotherapy, radiation therapy, cryodestruction, laser destruction, coagulation, excision.

For convenience of presentation of factual material, when analyzing the results of treatment performed in other medical institutions we proceeded from the final diagnosis established by us.

Despite a variety of treatment methods, the results were not as encouraging (Table 2).

Table 2. Treatment results in the comparison group

Result	Satisfactory	Unsatisfactory	Complications General	Local complications
Tactics	1(2%)	33(77%)	0	9(21%)
treatment	4(15%)	14 (55%)	3(12%)	3(11%)
Wait-and-see approach (43)	16(52%)	11(35%)	1(3%)	3(10%)
Hormone therapy (26)	21(21%)	58(58%)	4(4%)	15(15%)

P< 0,05

Example: Patient O. (ambulatory chart No. 15), 2 months of age, history and complains of a mass in the face, frontal area and upper lip. Examination revealed slight redness in these areas. Supervision with cancellation of vaccinations up to 6 months was recommended. A month later, parents brought the child again, because of hemangioma growth and increased intensity of redness. The child was again scheduled for observation. At the last examination, hormonal therapy was recommended, which the parents refused and referred to the TMA Surgical VOP clinical site (Figures 1,2,3). On examination, active hemangioma proliferation was noted, fluorescence index 12 ± 1.2 .

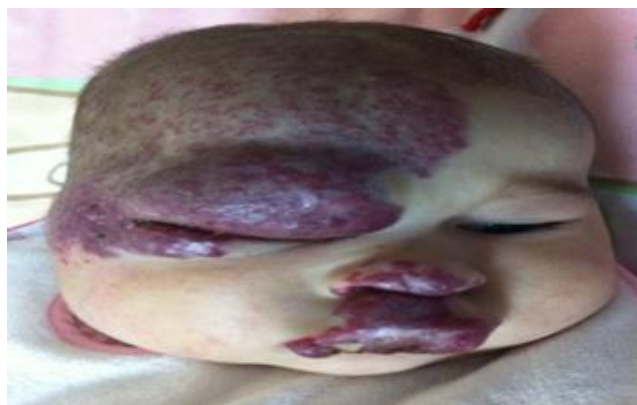


Figure 1. Patient A. after 3 months with a wait-and-see approach - progressive infantile hemangioma of the right side of the face and nasolabial region, oral cavity.

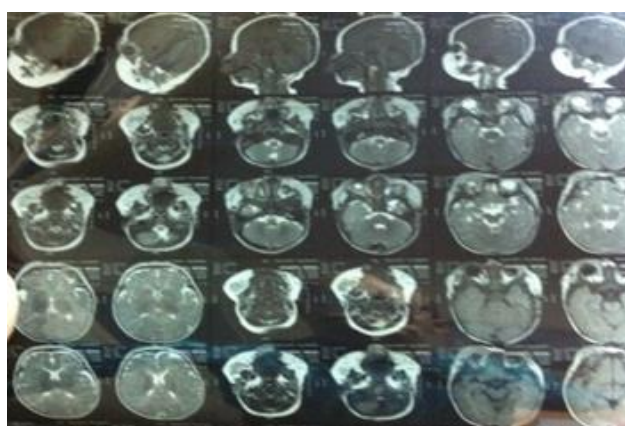


Fig. 2. Patient O. MSCT picture of infantile hemangioma of the right side of the face. Signs of tumor ingrowth into the soft tissues of the face and orbital area.

MSCT study revealed tumor growth in the soft tissues of the face and periorbital tissue. Obturation of the right nasal passage with a tumor was noted. Instrumental examination revealed destruction of the nasal septum and partial necrosis of the upper lip tissue. There are actively bleeding ulcers on the mucosa of the upper lip. Hemangioma of the right eyelid completely overlaps the eye. The child's vision is not impaired (Fig. 3).

In accordance with the algorithm of diagnosis and treatment developed by us, the child was diagnosed and underwent a course of conservative therapy for 3 months (Patent No. DGU 20150269 2015). A quite satisfactory treatment result was achieved (Fig. 3).



Fig. 3. Photo of Patient A. one year after the treatment treatment

Conclusion: Thus, waiting tactics in proliferative forms of infantile hemangiomas leads to progressive growth with the development of formidable complications. Pathogenetic, but delayed treatment allows to achieve tumor regression, but the possibility of residual phenomena is not excluded.

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